



## INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior  
National Park Service

All or some of the information you provide may become available to the public.

OMB # (1024-0236)  
Exp. Date (11/30/2010)  
Form No. (10-226)

<b>Reporting Year:</b> 2009	<b>Park:</b> Shenandoah NP	<b>Select the type of permit this report addresses:</b> Scientific Study	
<b>Name of principal investigator or responsible official:</b> William McShea		<b>Office Phone:</b> 540 635 6563	
<b>Mailing address:</b> Conservation and research  Center  1500 Remont Road Front Royal, VA 22630 US		<b>Office FAX</b> 540 635 6506 <b>Office Email</b> mcsheaw@si.edu	
<b>Additional investigators or key field assistants (first name, last name, office phone, office email)</b> No co-investigators			
<b>Project Title (maximum 300 characters):</b> Impact of white-tailed deer on select forest vertebrates			
<b>Park-assigned Study or Activity #:</b> SHEN-00127	<b>Park-assigned Permit #:</b> SHEN-2004-SCI-0002	<b>Permit Start Date:</b> Jan 12, 2004	<b>Permit Expiration Date:</b> Jan 12, 2010
<b>Scientific Study Starting Date:</b> Jan 01, 1990		<b>Estimated Scientific Study Ending Date:</b> Dec 31, 2010	
<b>For either a Scientific Study or a Science Education Activity, the status is:</b>  Continuing		<b>For a Scientific Study that is completed, please check each of the following that applies:</b>  <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years  <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park  <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed	
<b>Activity Type:</b> Research			
<b>Subject/Discipline:</b> Animal Communities / Wildlife			

### Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):

Our objective is to quantify the impact of white-tailed deer on select forest vertebrates through the exclusion of deer from multiple 10-acre areas. 3 exclosures and 1 control plot are located in the SNP. Deer were excluded in 1990 and surveys have been conducted since that time. In 2009, only acorn production was measured.

### Findings and status of Scientific Study or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):

We collected acorns from 3 exclosures and 1 control plot. Acorn production was measured with 50 0.6 m2 collectors and weight of acorn in kg per ha was calculated for each plot and compared with original data from 1990-2008. During the past 19 years, acorn production has ranged from 562.5 kg/ha in 1996 to 0 kg/ha in 1992. This year, acorn production was extremely low - 0.5kg/ha - as

both red oak and white oak trees failed to produce nuts.

**For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?**

No

**Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):**  
\$0

**Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):**  
\$0

**List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:**

**Paperwork Reduction Act Statement:** A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. Public reporting for this collection of information is estimated to average 1.625 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms. Direct comments regarding this burden estimate or any aspect of this form to Dr. John G. Dennis, Natural Resources (3127 MIB), National Park Service, 1849 C Street, N.W., Washington, DC 20240.